

XXI.—On the African Mongooses usually referred to the *Herpestes gracilis* Group. By R. C. WROUGHTON.

THE following notes refer to the section of the Herpestinæ containing the forms of the small mongoose with a dark tail-tip (usually black, rarely brown). The members of the section are found all over Africa, varying somewhat in size and colour, as was to be expected.

The following is a list of the names already given to members of this section, so far as I have been able to ascertain :—

1. 1835. *Herpestes sanguineus*, Rüppell, N. Wirb. Abyss. p. 27.
2. 1835. *Herpestes gracilis*, Rüppell, N. Wirb. Abyss. p. 29.
3. 1835. *Herpestes mutgigella*, Rüppell, N. Wirb. Abyss. p. 29.
4. 1836. *Ichneumon rattlamuchi*, Smith, App. Rep. Exp. C. Afr. p. 42.
5. 1836. *Ichneumon Cauui*, Smith, App. Rep. Exp. C. Afr. p. 42.
6. 1836. *Cynictis melanurus*, Martin, P. Z. S. p. 36.
7. 1838. *Herpestes badius*, Smith, Ill. Afr. Zool. ii. pl. iv.
8. 1839. *Ichneumia nigricaudatus*, Geoffroy, Mag. Zool. p. 18.
9. 1847. *Herpestes Galinieri*, Guérin & Ferret, Galinier, Voy. Abyss. Atlas, Zool. pl. i.
10. 1848. *Herpestes ochraceus*, Gray, P. Z. S. p. 138.
11. 1849. *Herpestes punctulatus*, Gray, P. Z. S. p. 11.
12. 1850. *Herpestes Lefebvrei*, Desmurs & Prévost, Lefebvre, Voy. Abyss. Atlas, Zool. pl. i.
13. 1852. *Herpestes ornatus*, Peters, Reis. Moss. p. 117.
14. 1855. *Herpestes ochromelas*, Pucheran, Rev. Zool. vii. p. 393.
15. 1861. *Herpestes iodoprymnus*, Heuglin, Nov. Act. Ac. Leop. xxix. p. 23.
16. 1864. *Herpestes Granti*, Gray, P. Z. S. p. 561.
17. 1864. *Calogale venatica*, Gray, P. Z. S. p. 564.
18. 1877. *Herpestes ruficauda*, Heuglin, Reis. N.O.-Afr. p. 41.
19. 1877. *Herpestes mutscheltschela*, Heuglin, Reis. N.O.-Afr. p. 43.
20. 1894. *Herpestes Neumanni*, Matschie, SB. Ges. naturf. Fr. Berl. p. 121.
21. 1904. *Herpestes ochraceus perfulvidus*, Thomas, Ann. & Mag. Nat. Hist. p. 96.
22. 1904. *Herpestes ochraceus fulvidior*, Thomas, Ann. & Mag. Nat. Hist. p. 97.
23. 1905. *Herpestes Bocagei*, Thomas & Wroughton, Ann. & Mag. Nat. Hist. xvi. p. 170.

Practically all these forms were described as distinct species, some even as belonging to separate genera. In 1882, in his paper on the African Herpestinæ (P. Z. S. p. 59), Mr. Thomas brought all these forms together as varieties of one species, i. e. *gracilis*, Rüpp. In 1898 Mr. de Winton, with increased material to guide him, pointed out that Mr. Thomas's variety "d" must rank as a distinct species on account of differences in skull-characters. At present the

material is at least five times that which Mr. de Winton examined. It divides easily into two groups—a smaller, with a hind foot (circ.) 50 mm. and a skull-length (circ.) 57 mm., and a larger, with a hind foot (circ.) 60 mm. and a skull-length (circ.) 62 mm. The group of smaller animals subdivides into (1) Mr. Thomas's variety "d," that is *Mungos ochraceus*, Gray, with its races; and (2) into a group of which the oldest representative is *Cynictis melanurus*, Mart. Similarly the larger forms are separable into two groups, viz. a northern, in which the crown and nape are coloured like the back, and a southern, characterized by a tawny suffusion on the head and neck. This colour-pattern is so striking and constant that (combined with the fact that a band across Africa from east to west, in which only a small form is found, separates the habitats of the northern and southern groups) I deem myself justified in ranking this form as a distinct species (or, more correctly, group of species).

## Key.

- I. Size smaller; hind foot (circ.) 50 mm.
- A. Brain-case swollen anteriorly, postorbital constriction sudden.
- a. Hairs of body annulated. (Abyssinia.) (1) *ochraceus*, Gray.
- b. Hairs not annulated in dorsal region, which, with tail, is darker than back. (Somali.) . . . . . (2) *o. fulvidior*, Thos.
- c. Hairs of body not annulated. (Somali.) (3) *o. perfulvidus*, Thos.
- B. Brain-case narrowing gradually forward to postorbital constriction.
- a. Skull larger; condylo-basal length 60-62 mm.; zygomatic breadth 33-34.
- a<sup>1</sup>. General colour "burnt umber"; face and crown like body; length *c-m*<sup>1</sup> 23 mm. (Gold Coast.) . . . . . (4) *melanurus*, Mart.
- b<sup>1</sup>. General colour "burnt umber"; crown black; length *c-m*<sup>1</sup> 21.7 mm. (Zanzibar Island.) . . . . . (5) *m. Lasti*, subsp. n.
- b. Skull smaller; condylo-basal length 58-60 mm.; zygomatic breadth 29.
- a<sup>1</sup>. General colour yellow; length *c-m*<sup>1</sup> 20 mm. (Angola.) . . . . . (6) *m. Bocagei*, Thos. & [Wr.
- b<sup>1</sup>. General colour drab; length *c-m*<sup>1</sup> 21 mm. (Cape Verd.) . . . . . (7) *m. canis*, subsp. n.
- c<sup>1</sup>. General colour red-umber; length *c-m*<sup>1</sup> 20.7 mm. (Zomba.) . . . . . (8) *m. zombæ*, subsp. n.
- II. Size larger; hind foot (circ.) 60 mm.
- A. No tawny suffusion on head and neck.
- a. Tail-tip chestnut. (Kordofan.) . . . . . (9) *sanguineus*, Rüpp.
- b. Tail-tip black.
- a<sup>1</sup>. General colour pinkish drab; hind foot 58 mm. (Abyssinia.) . . . . . (10) *s. gracilis*, Rüpp.

- b*<sup>1</sup>. General colour brown; hind foot 62 mm. (Abyssinia.) . . . . . (11) *s. mutgigella*, Rüpp.  
*c*<sup>1</sup>. General colour "seal-brown"; hind foot 58 mm. (Ruwenzori.) . . . . . (12) *s. proteus*, Thos.  
*d*<sup>1</sup>. General colour "olive-buff"; hind foot 58 mm. (Fort Hall, B.E.A.) (13) *s. ibeæ*, subsp. n.  
 B. Tawny suffusion on head, neck, and shoulders.  
*a*. Hair not or only obscurely annulated.  
*a*<sup>1</sup>. Tail-tip brown. (Ugogo.) . . . . . (14) *Granti*, Gray.  
*b*<sup>1</sup>. Tail-tip black. (N.W. Transvaal.) (15) *ratlamuchi*, Sm.  
*b*. Hair annulated. (S. Africa.) . . . . . (16) *Cuvui*, Sm.

### 1. *Mungos ochraceus*, Gray.

1848. *Herpestes ochraceus*, Gray, P. Z. S. p. 138.

Gray's type is in the collection.

The following are approximate dimensions:—

Head and body 250 mm.; tail 240; hind foot 48.

Skull: condylo-basal length 58; basilar length 53; greatest breadth 31; palate breadth across  $p^4$  20; length  $c-m^1$  19.6.

The skull is recognizable from that of *M. gracilis* &c. by the inflation anteriorly of the brain-case, recalling somewhat the shape of the quite young skull in both these species.

Gray describes the colour as "Pale brownish yellow, very minutely mixed or punctated with a darker tint."

*Hab.* Type locality "Abyssinia." (Type, B.M. no. 44. 7. 30. 44.)

5. 5. 11. 3. Near Berbera (*Mr. Drake Brockman*).

98. 6. 9. 3. Jefa Muder, Somaliland (*Messrs. Hawker & Cheetham*).

59. 7. 9. 10. Coast of Africa (*Verreaux*).

### 2. *Mungos ochraceus fulvidior*, Thos.

1904. *Herpestes ochraceus fulvidior*, Thomas, Ann. & Mag. Nat. Hist. xiv. p. 97.

Thomas describes this form as grizzled ochraceous, darker than in the typical form, the median dorsal area unannulated, strong tawny ochraceous, in continuity with the tawny of the tail.

Dimensions:—

Head and body 250 mm.; tail 240; hind foot 51; ear 26.

Skull: condylo-basal length 58; basilar length 53; greatest breadth 31; palate breadth across  $p^4$  19; length  $c-m^1$  20.5.

*Hab.* Type locality Mandeira, Somali. (Type, B.M. no. 97.8.9.7: *Dr. Atkinson.*)

98.3.9.3. N. Haud, Somali (*C. V. A. Peel.*)

### 3. *Mungos ochraceus perfulvidus*, Thos.

1904. *Herpestes ochraceus perfulvidus*, Thomas, *Ann. & Mag. Nat. Hist.* xiv. p. 96.

Thomas describes this species as unannulated, "uniform bright ochraceous on head, body, and outer side of limbs."

Dimensions of the type (measured in the flesh):—

Head and body 275 mm.; tail 220; hind foot 51; ear 25.

Skull: condylo-basal length 51.5; basilar length 53.5; greatest breadth 34; palate breadth across  $p^4$  19; length  $c-m^1$  20.

The above measurements of body and tail seem to me to be open to doubt. There is nothing to show that this form differs at all strikingly in size from the two preceding ones.

*Hab.* Type locality Wardair, Somali. (Type, B.M. no. 4.5.9.9: *Capt. Dunn.*)

7.4.4.1-2. Ber, near Burao, Somali (*Mr. Drake Brockman.*)

### 4. *Mungos melanurus*, Mart.

1836. *Cynictis melanurus*, Martin, *P. Z. S.* p. 56.

Martin's description is very meagre, but, besides the actual type, there are several specimens from the same and neighbouring localities. The following is a short general description of this form:—General colour "burnt sienna." Hairs of back short (10-12 mm.), "orange-rufous," ringed and tipped with black, forming a grizzling which tends to produce transverse alternate dark and light bands, this tendency extending much further forward than in the Abyssinian forms, visible even on the neck behind the ears; face the same colour as the back, but much more finely grizzled; tail coloured as back, with the usual black tip.

Dimensions:—

Head and body 300 mm.; tail 280; hind foot 53.

Skull: condylo-basal length (circ.) 63; basilar length (circ.) 58; zygomatic breadth 34; palate breadth across  $p^4$  21; length  $c-m^1$  23.

*Hab.* Type locality Sierra Leone. (Type, B.M. no. 55.12.24.229.)

72.2.22.2. Ashanti.

76.10.28.9. Gold Coast (*Col. Strachan.*)

*Ann. & Mag. N. Hist.* Ser. 7. Vol. xx.

5. *Mungos melanurus Lasti*, subsp. n.

General colour near "Mars brown," with the usual black tail-tip. Hairs of back 10-12 mm. long, black, with a lower pale buff and a subterminal tawny ring. Face and crown almost black, very finely grizzled with tawny; tail coloured like the back, individual hairs 20 mm. long.

Dimensions:—

Head and body (circ.) 270 mm.; tail (circ.) 250; hind foot 50; ear 25.

Skull: condylo-basal length 62; basilar length 56; zygomatic breadth (?); palate breadth across  $p^4$  21.5; length  $c-m^1$  21.7.

*Hab.* Type locality Zanzibar Island. (Type, B.M. no. 6. 6. 5. 11.)

6. 6. 5. 8-16. Zanzibar Island (*J. T. Last*).

6. 6. 5. 27-29 (skulls only). Zanzibar Island (*J. T. Last*).

The black mask is very noticeable; in a series of nine specimens it is absent in only one, in which the face-hairs are markedly longer, more coarsely annulate, and a red-brown is substituted for the usual pale buff.

In the general colour there is a strong likeness between *M. m. Lasti* and *M. melanurus* of the West Coast, but the black face suffices to distinguish the former. Even the exceptional individual mentioned above has a quite different look to the minutely but distinctly grizzled mask of *M. melanurus*.

6. *Mungos melanurus Bocagei*, Thos. & Wr.

*Herpestes gracilis punctulatus*, Bocage.

1905. *Herpestes Bocagei*, Thomas & Wroughton, Ann. & Mag. Nat. Hist. xvi. p. 170.

The general colour is a bright ochraceous, strikingly different from the red-brown and drab of the preceding more northern forms.

Dimensions:—

Head and body 265 mm.; tail 235; hind foot 52; ear 25.

Skull: condylo-basal length (probably circ.) 58; zygomatic breadth 29; palate breadth across  $p^4$  19; length  $c-m^1$  20.

*Hab.* Caconda, Angola. (Type, B.M. no. 5. 5. 9. 13.)

7. *Mungos melanurus canus*, subsp. n.

General colour drab. Hairs of the back 15 mm. long, black, with two cream-buff rings, one of which is subterminal,

leaving only a very short black tip. Face coloured like back, but the grizzling finer; tail coloured like back.

Dimensions:—

Head and body (circ.) 260 mm.; tail (circ.) 250; hind foot 52.

Skull: condylo-basal length (circ.) 58; basilar length (circ.) 53; zygomatic breadth 29; palate breadth across  $p^4$  19; length  $c-m^1$  21.5.

Type (young adult), B.M. no. 72. 12. 12. 5.

Hab. Cape Verd.

#### 8. *Mungos melanurus zombæ*, subsp. n.

General colour "raw umber," with black tail-tip.

Hairs of back 10–12 mm. long, dirty white at base, followed by four rings, black and cream-buff alternately, with a black tip, but in a very large proportion of the hairs the subterminal pale ring only gradually darkens to black at the extreme tip. Face darker than back, almost black, very finely grizzled with white; tail and feet coloured like back.

Dimensions:—

Head and body (circ.) 260 mm.; tail (circ.) 220; hind foot 48; ear 24.

Skull: condylo-basal length (circ.) 60; basilar length 55; zygomatic breadth 29; palate breadth across  $p^4$  19; length  $c-m^1$  20.7.

Hab. Type locality Zomba, Nyasa. (Type, B.M. no. 97. 10. 1. 67.)

93. 5. 2. 2–3. Zomba, Nyasa (*Sir H. H. Johnston*).

97. 10. 1. 67. Zomba, Nyasa (*Sir H. H. Johnston*).

#### 9. *Mungos sanguineus*, Rüpp.

1835. *Herpestes sanguineus*, Rüppell, N. Wirb. Abyss. p. 27.

This form has hitherto been accepted as a species distinct from *M. gracilis*. The Natural History Museum has no specimen from Kordofan, the type locality of *M. sanguineus*, but a specimen from the hills near Suakim can, I believe, be nothing but a form intermediate between *M. gracilis* and *sanguineus*. It is very pale in general colour and the tail-tip is half chocolate-brown and half black. There is a cotype of *M. gracilis* in the collection, and comparing these two specimens with Rüppell's plate of *M. sanguineus* and *gracilis*, the Suakim individual resembles the figure of *M. sanguineus* quite as much as (if not rather more than) the cotype agrees with that of *M. gracilis*. In the dimensions recorded by Rüppell there is

practically no difference between those of these two forms. I have no skull of either typical *M. sanguineus* or even of the Suakim form which I believe to be closely allied to it. Rüppell gives figures of skulls of *M. sanguineus* and *gracilis*, and at first sight the emargination of the lambdoid crest (which he particularly notices in the letterpress) and the almost complete absence of a postorbital constriction in the former seem to point to a fundamental difference in skull-shape between the two forms. An examination of the long series of skulls in the Natural History Museum shows, however, that in this group both these characters merely indicate immaturity. I think I am justified in concluding that *M. sanguineus* and *gracilis* cannot be specifically separated; and as *M. sanguineus* is the earlier name that form must be accepted as the typical one of this group, which extends through the length and breadth of Africa, with no variation other than of size and colour.

I follow Rüppell in describing *M. sanguineus* as "reddish isabella colour, grizzled with chestnut and with a rust-red tail-tip." Rüppell's dimensions are based on a quite young individual, and I offer the following (based on adult *M. gracilis* and the Suakim specimen) as probably those of a normal specimen:—

Head and body 300 mm.; tail 325; hind foot 58.

*Hab.* Type locality Kordofan.

(?) 6. 10. 2. 9. Erkowit, Suakim (*Mr. A. L. Butler*).

#### 10. *Mungos sanguineus gracilis*, Rüpp.

1835. *Herpestes gracilis*, Rüppell, N. Wirb. Abyss. p. 29.

1847. *Herpestes Galinieri*, Guérin & Ferret, Galinier, Voy. Abyss. Atlas, Zool. pl. i.

1850. *Herpestes Lefebvrei*, Desmurs & Prévost, Lefebvre Voy. Abyss. Atlas, Zool. pl. i.\*

1855. *Herpestes ochromelas*, Pucheran, Rev. Zool. vii. p. 393.

1861. *Herpestes iodoprimum*, Heuglin, Nov. Act. Ac. Leop. xxix. p. 63.

1861. *Herpestes adailensis*, Heuglin, Peterm. Geog. Mitth. p. 17.

Rüppell describes the colour of his type as "cinereo flavicans" and "gelb grau," but I think the term "pinkish drab" used in my key gives a much better idea both of a cotype in the collection and of the animal represented in Rüppell's plate. Rüppell's description is evidently based on a young individual and the cotype mentioned above is also

\* This is the name given in the index to the Atlas, but at the foot of the plate itself is printed "*Herpestes gracilis*."

young. The proportionally long tail is specially mentioned by Rüppell.

Dimensions :—

Head and body 300 mm. ; tail 340 ; hind foot 58.

Skull : condylo-basal length 62 ; basilar length 37 ; zygomatic breadth 32 ; palate breadth across  $p^4$  20 ; length  $c-m^1$  21.5.

*Hab.* Type locality near Massowa, Abyssinia. (Cotype, B.M. no. 163 a.)

69. 10. 24. 11. Soaroo, Abyssinia (*W. T. Blanford*).

69. 10. 24. 13. Adigrat, Tigre, Abyssinia (*W. T. Blanford*).

69. 2. 2. 6. Abyssinia. Purchased.

6. 11. 1. 17. L. Zuai, Abyssinia (*Zaphiro, H. N. McMillan*).

*Herpestes Galinieri* is from the figure plainly a very young *M. gracilis*. Mr. Thomas has quite recently made a special examination of all the specimens in the Paris Museum and assures me that the animal figured by Desmurs and Prévost as *H. gracilis*, on which both the names *Lefebvrei* and *ochromelas* were based, is a pale example of *M. s. gracilis*, in spite of the resemblance that the figure bears to *M. ochraceus*.

### 11. *Mungos sanguineus mutzigella*, Rüpp.

1835. *Herpestes mutzigella*, Rüppell, N. Wirb. Abyss. p. 29.

1839. *Ichneumia nigricaudatus*, Geoffroy, Mag. Zool. p. 18.

1877. *Herpestes mutscheltschela*, Heuglin, Reis. N.O.-Afr. p. 43.

Rüppell defines *M. mutzigella* as "blackish umber-brown." There is considerable individual variation in the extent to which the body-hairs are annulated. In a cotype from near Masowa all annulation is completely absent, while in a specimen from Erythræa almost all the hairs are annulated, though very coarsely. In all cases, however, it would seem that annulation of the hairs is absent on the tail. The form is rather larger than typical *M. sanguineus* and has a rather markedly short tail.

Dimensions as follows :—

Head and body 350 mm. ; tail 320 ; hind foot 62.

Skull : condylo-basal length 65 ; basilar length 60 ; zygomatic breadth 34 ; palate breadth across  $p^4$  21 ; length  $c-m^1$  23.

*Hab.* Type locality Dembea and Simen Dists., Abyssinia. (Cotype, B.M. no. 164 a.)

46. 6. 15. 37. Abyssinia.

69. 10. 24. 12. Adigrat, Tigre, Abyssinia (*W. T. Blanford*).

3. 12. 5. 2-3. Chadi Saati, Erythræa (*Schrader*).

12. *Mungos sanguineus proteus*, Thos.

1907. *Mungos gracilis proteus*, Thos. Ann. & Mag. Nat. Hist. xix. p. 119.

A very variable form, much subject to melanism. Mr. Thomas describes the colour as ranging from "grizzled tawny ochraceous" to "blackish bistre."

The recorded dimensions are:—

Head and body 306 mm.; tail 260; hind foot 59; ear 25.

Skull: condylo-basal length 61; basilar length 56; zygomatic breadth 30.5; palate breadth across  $p^4$  19.5; length  $c-m^1$  21.7.

*Hab.* Type locality Ruwenzori. (Type, B.M. no. 6. 12. 4. 35.)

6. 12. 4. 31-36. Ruwenzori.

13. *Mungos sanguineus ibea*, subsp. n.

Size about as in *M. s. mutgigella*; general colour "olive-buff." Hairs of back 15-20 mm. long, black, with subbasal and subterminal rings bright buff, each 2-3 mm. wide; grizzling of back, as in all the preceding forms, tending to assume transverse dark stripes on hinder back and flank; head and feet more finely, tail more coarsely grizzled; hairs of latter, 25-30 mm. long, each with three or four buff rings.

Skull distinctly longer than in any of the preceding forms, the extra length almost wholly behind postorbital constriction.

Dimensions of the type specimen:—

Head and body 330 mm.; tail 300; hind foot 60; ear 26.

Skull: condylo-basal length 67; basilar length 62; zygomatic breadth 35; palate breadth across  $p^4$  22; length  $c-m^1$  23.5.

*Hab.* Kikuyu, British East Africa. (Type, adult ♀, B.M. no. 4. 12. 6. 7. Collected by S. L. Hinde, Esq., at Fort Hall, British East Africa.)

Like the other forms it seems that *M. s. ibea* has a tendency to melanism, though much less so than in *M. s. mutgigella* or *s. proteus*. Of the two specimens taken at the same place by Mr. Crawshay, one is quite normal; in the other the width of the buff rings is much reduced everywhere, while on the face and along the median dorsal line they are absent.

92. 12. 3. 6. Machakos (*F. J. Jackson*).  
 0. 3. 27. 11. Lé, Galaland (*Lord Delamere*).  
 0. 5. 3. 1-2. Roromo, Kikuyu (*R. Crawshay*).  
 0. 6. 21. 8. British East Africa (*Lord Delamere*).  
 2. 7. 6. 13. Fort Hall, B.E.A. (*S. L. Hinde*).  
 3. 4. 4. 1. Fort Hall, B.E.A. (*S. L. Hinde*).  
 3. 11. 1. 2. Fort Hall, B.E.A. (*S. L. Hinde*).  
 4. 2. 5. 3-4. Fort Hall, B.E.A. (*S. L. Hinde*).  
 4. 11. 5. 11-12. Fort Hall, B.E.A. (*R. Meinertzhagen*).

#### 14. *Mungos Granti*, Gray.

1864. *Herpestes Granti*, Gray, P. Z. S. p. 561.

1894. *Herpestes Neumanni*, Matschie, SB. Ges. naturf. Fr. Berl. p. 121.

Matschie's *M. Neumanni* is from Ugogo, and is therefore a topotype of *Granti*, Gray, and a comparison of Gray's type with Prof. Matschie's description of *M. Neumanni* shows that without doubt they are the same form.

General colour ochraceous, all the hairs on the median line from nose to tail tipped with tawny; tip of tail chestnut.

Dimensions:—

Head and body (circ.) 320 mm.; tail (circ.) 270; hind foot 58; ear 25.

Skull: condylo-basal length 63; basilar length 58; zygomatic breadth 30; palate breadth across  $p^4$  21.5; length  $c-m^1$  22.

*Hab.* Type locality Mgunda Mkali. (B.M. no. 63. 7. 7. 18, *Capt. Speke*.)

#### 15. *Mungos ratlamuchi*, Sm.

1836. *Ichneumon ratlamuchi*, Smith, App. Rep. Exp. C. Afr. p. 42.

1838. *Herpestes badius*, Smith, Ill. Zool. S. Afr. pl. iv.

“Above chestnut, deepest on the head, neck, and tail; the hair of the back ringed with dull yellow, that of first half of tail with brown and yellow; tip of tail deep black.” This is Smith's description of *M. ratlamuchi*. In his description of *M. badius* he substitutes “bright bay” for “chestnut,” and mentions the black annulations of the hairs of the head and neck which cause the deepening of colour noted in his first description. Both descriptions apply to the type specimen in the Museum Collection.

Dimensions:—

Head and body 300 mm.; tail 290; hind foot 58; ear 25.

Skull: condylo-basal length 63; basilar length 58; zymo-

matic breadth 33; palate breadth across  $p^4$  20.5; length  $c-m^1$  21.5.

*Hab.* Type locality (of *M. railamuchi*) "between Latakoo and the Tropic"; (of *M. badius*) "between Old Latakoo and Karichane, 120 miles eastward." (Type, B.M. no. 46.6.1.14.)

### 16. *Mungos Cauui*, Sm.

1836. *Ichneumon Cauui*, Smith, App. Rep. Exp. C. Afr. p. 42.

1849. *Herpestes punctulatus*, Gray, P. Z. S. p. 11.

1852. *Herpestes ornatus*, Peters, Reise Moss. p. 117.

1864. *Calogale venatica*, Gray, P. Z. S. p. 563.

I have been able to examine about 40 specimens from localities spread over 10° of longitude and 15° of latitude, and I have to confess that I cannot differentiate any of them as even racially distinct from the rest. It is true that a series from Matabeleland is on the average paler than the rest, as a series from Mashonaland and the Zambesi basin is somewhat redder, but single individuals could be picked from other localities which are quite as pale or as red. It is to be regretted that Smith's name *Cauui* is the oldest, it was given to a young specimen from the neighbourhood of the Kalahari Desert, a quite extreme example of the pale desert type. Peters's *M. ornatus* is also based on a quite young specimen\* of a darker redder type, while *M. punctulatus*, Gray, undoubtedly represents the normal form.

The general colour is hard to describe, it is some shade of drab tinged with greenish, having in all cases a greater or less suffusion of reddish on the loins and rump.

Dimensions:—

Head and body 300 mm.; tail 275; hind foot 58; ear 25.

Skull: condylo-basal length 65; basilar length 60; zygomatic breadth 33-35; palate breadth across  $p^4$  20-23; length  $c-m^1$  22.

*Hab.* Type locality Currichaine (N.W. Transvaal).

45. 4. 4. 2. Durban, Natal. (Type of *H. punctulatus*, Gray.)

5. 3. 8. 13. Illovo, Natal (*Rudd Collection*).

4. 12. 3. 36-38. Umvalosi, Zululand (*Rudd Collection*).

4. 5. 1. 33-36. Etshowe, Zululand (*Rudd Collection*).

4. 9. 1. 32-34. Zuurbronn, E. Transvaal (*Rudd Collection*).

\* Peters's figure of the skull of *M. ornatus* shows all the sutures which are only visible in youth. A specimen in the collection from the Zambesi not far from Tette, the type locality of *M. ornatus*, answers both in dimensions and colouring to Peters's description; it is quite young: an older specimen from the same locality is identical with other S. African individuals in dimensions and colour-pattern.

98. 4. 4. 13. Krugersdorp, West Transvaal (*H. P. Thomasset*).
46. 6. 2. 23. Mohopau Berg, Bechuanaland.
97. 1. 4. 1-4. Matabeleland (*F. C. Selous*).
99. 2. 23. 1. Ngamiland (*Capt. Lugard*).
93. 11. 21. 1. De Kaap (*Dr. P. Rendall*).
6. 4. 3. 31-36. Woodbush, N.W. Transvaal (*Rudd Collection*).
5. 12. 9. 19-20. Klein Letaba, N. Transvaal (*Rudd Collection*).
6. 8. 2. 49. Legogot, N.E. Transvaal (*Rudd Collection*).
6. 4. 7. 1. Sabi River, N.E. Transvaal (*J. S. Hamilton*).
7. 3. 25. 4. Salisbury, Mashonaland (*Guy Marshall*).
97. 1. 4. 5. Salisbury, Mashonaland (*F. C. Selous*).
99. 8. 3. 4. Mashonaland (*Boyd Alexander*).
7. 1. 11. 21. N. Rhodesia (*S. A. Neave*).
1. 6. 26. 2. Pasa (*Col. Manning*).
97. 10. 1. 66. L. Nyasa (*Sir H. Johnston*).

XXII.—*The Name of the Armenian Wild Sheep.*

By R. LYDEKKER.

CONSIDERABLE diversity of usage prevails among naturalists with regard to the scientific name of the Armenian wild sheep, some writers adopting *Ovis Gmelini*, Blyth (1840), while others prefer *Ovis orientalis*. When the latter name is used the authority is generally given as G. F. Gmelin, 'Reise,' vol. iii. p. 486 (1784); but the animal is there referred to merely as "das orientalische Schafe," which is, of course, not a technical name. On the other hand, in Brandt and Ratzeburg's 'Getreue Darstellung und Beschreibung der Thiere, etc.,' Berlin, 1829, p. 54, pl. ix. fig. 1, we find the wild sheep of the "Ceraunian Mountains" of Persia described and figured as *Ovis musimon*, var. *orientalis*; and this name, modified to *O. orientalis*, consequently stands. It may be added that the work in question is really composed of extracts from 'Medizinische Zoologie,' a serial of which the first volume, containing the name in question, appears to have been published in 1827.

As to the "Ceraunian Mountains" of Persia, I take it that this must be an application of the name in a sense analogous to that in which the term "Alps" is often used, seeing that the Ceraunian or Acroceraunian Mountains are